CRS Spanish Functional Description

Version 8 - November 10, 1999

This document provides a comprehensive description of the CRS Spanish functionality provided in software Build 6.0. It contains a detailed description of the full Spanish language message and abbreviated Spanish watch/warning message capabilities. It also provides a description of the changes to the ASCII database file necessitated by the Spanish implementation and a description of the utility software provided to more easily implement those changes. The detailed procedures for the implementation of the Spanish messaging capability are contained in a separate document entitled **CRS Build 6.0 Installation Procedures (Section 3).** Additional information concerning the Spanish capability is contained in the Build 6.0 version of the **CRS Site Operator's Manual**.

1.0 Introduction

CRS Build 6.0 contains the complete implementation of the Spanish language capability. For sites that employ Spanish speaking staff, CRS will process properly identified Spanish text messages for broadcast in the Spanish synthetic voice. For sites that do not employ Spanish speaking staff, CRS will provide the capability to automatically generate an abbreviated version of the English message in Spanish. The site will select whether the abbreviated message will broadcast either once or in every Broadcast Cycle The Spanish capability provides a second set of DECtalk files that reside on each FEP and are uploaded to the appropriate DECtalk cards at CRS startup time and when a transmitter upload is requested. Obviously, a transmitter or playback channel must have the Spanish DECtalk files uploaded to it before it may generate Spanish speech from text input.

2.0 Background Spanish Information

The Transmitter Configure window contains the transmitter specific information for each channel. If you select a transmitter and then click on the option button to the right of the Language field, you can change the lists of the four message component fields below to show the names of the Spanish text files. If the Dictionary name is blank or contains the name "NULL", there are no Spanish DECtalk files uploaded to that channel's DECtalk card. Prior to Build 6.0, the contents of the Spanish version of these component files was of no importance because there was no Spanish capability. However, Build 6.0 requires that the Spanish Dictionary name be defined if the Spanish DECtalk files are to reside on that channel's card. As part of the Build 6.0 installation procedure, each site will run the ADD_SPA utility (see **Section 4.2 ADD_SPA Utility Operation)** to configure its ASCII database for Spanish. ADD_SPA will automatically load the abbreviated Spanish messages into the ASCII database file. It also will allow the site to select Spanish capable transmitters, and it will edit the dictionary name in the ASCII database file accordingly. If Spanish is required, the ASCII database file will be set to "SPA", otherwise it will be set to "NULL". ADD_SPA will automatically allow a Spanish capable transmitter to

retain its capability to broadcast English messages as well.

Please note that actual Spanish user dictionary words are not required to be present in the selected SPA dictionary for the transmitter to be uploaded with Spanish DECtalk files.

When entering Spanish text, special Spanish language symbols which are required to elicit the appropriate pronunciation from DECtalk may be entered from the keyboard into all CRS text box widgets (e.g., Message Components or Weather Message text windows). To enter a specially-accented character, type a Control-T followed by the alphabetic character followed by the accent character. For example, to enter the tilde above the first "n" in "manana", type a Control-T, followed by the letter "n", followed by the tilde ("~").

The discussion that follows provides the details necessary to understand how both the full Spanish messages and the abbreviated Spanish messages are handled by CRS.

3.0 Full Spanish Message Generation

For sites that have staff and software available to generate CRS formatted messages in Spanish, CRS will fully process them and convert them to the Spanish voice. Sites will be able to create a Spanish text message via diskette input or via AFOS/AWIPS. Each Message Type is defined with a Language (English or Spanish) associated with it. In order to allow existing English message types to be used to define a Spanish text message input from diskette, the message name must contain a ".SPA" extension. A dialog box is provided which asks the operator if he would like to modify the language for this message only from English to Spanish. An affirmative answer tags the message being created as Spanish, allowing it to be spoken appropriately by DECtalk when broadcast. For manually recorded voice messages, Spanish equivalent message types of the English versions must be created. CRS will not allow the operator to record a Spanish message by changing an already existing English Language Message Type to Spanish in the Weather Message window. When the operator creates the new Spanish equivalent Message Type from the Message Type window, he must select Spanish for the Language.

The Word Pronunciation capability within CRS has been modified to fully support a Spanish dictionary. Operators may freely switch back and forth between pronouncing English (select ENG in the Dictionary field) and Spanish (select SPA in the Dictionary field) words. The playback channel(s) must have the Spanish DECtalk files uploaded for the Word pronunciation feature to work properly. The ADD_SPA utility will automatically set up the ASCII database file so that the Spanish DECtalk files are uploaded to the playback channel(s) if one or more transmitters are configured for Spanish. The procedure for adding words to the Spanish dictionary is identical to the procedure for the English dictionary. When a Spanish word is pronounced, the Spanish phonemic pronunciation will be returned by the DECtalk card, and the operator may save it in the database in preparation for compilation and creation of the SPA.<dtu tmp tab> files and subsequent uploading to the appropriate DECtalk cards. Operators may take

advantage of the Control-T feature described in the **2.0 Background Spanish Information** section to enter words containing specially-accented characters.

Please take note that sites wishing to use the full Spanish message generation, must add the SPA.<dtu tmp tab> files to the Word Pronunciation backup and recovery procedures.

3.1 Spanish Time Announcements

Build 6.0 also provides support for Spanish time announcements. This support includes Spanish equivalents for time zone (properly adjusted for Daylight Savings Time where applicable) and morning (A.M.) and afternoon/evening (P.M.) adjuncts to the 12 hour time report. This feature requires the generation of a Spanish time announcement Message Type whose only difference from the English counterpart is the intended language of broadcast. Normally, the English Message Type is DTIMETYPE and is included in the appropriate Broadcast Suite(s). At the appropriate place in the Broadcast Cycle, the current time is broadcast. To generate the time announcement in Spanish, a similar Message Type (DTIMETYPS) must be created with the Language as Spanish. The new Spanish time announcement message type similarly must be included in the appropriate Broadcast Suite(s).

4.0 Abbreviated Spanish Watch/Warning Capability

For sites that do not employ Spanish speaking staff, CRS will provide the capability to automatically broadcast an abbreviated version of a the English message in Spanish, referred to hereafter as a Spanish Trailer Message (STM). The NWSHQ-developed utility, ADD_SPA, initially will configure each site's ASCII database file to include a new Block 7B containing 49 watch/warning category types to implement this capability. ADD_SPA will allow each site to select which category types will generate a STM and which transmitter(s) will broadcast the STM.

The following table contains the watch/warning 3-character product category types (Trailer Names) along with their English and Spanish language descriptions for the 49 types of STMs that are loaded into Block 7B of the ASCII database file.

ABBREVIATED SPANISH WATCH/WARNING CATEGORY TYPES

TOA	***Tornado Watch***	***Vigilancia de Tornado***
TOR	***Tornado Warning***	***Aviso de Tornado***
TOW	***Tornado Warning***	***Aviso de Tornado***
SVA	***Severe Thunderstorm Watch***	***Vigilancia de Tormenta Severa***
SVR	***Severe Thunderstorm Warning***	***Aviso de Tormenta Severa***

SVW	***Severe Thunderstorm Warning***	***Aviso de Tormenta Severa***
SVS	***Statement About Severe Weather***	***Comunicado Sobre el Tiempo Severo***
FFA	***Flash Flood Watch***	***Vigilancia de Inundaciones Repentinas***
FFW	***Flash Flood Warning***	***Aviso de Inundaciones***
FFS	***Statement About Flash Flooding***	***Comunicado Sobre las Inundaciones Repintinas***
FLA	***Flood Watch***	***Vigilancia de Inundación***
FLW	***Flood Warning***	***Aviso de Inundación***
FLS	***Statement About Flooding***	***Comunicado Sobre las Inundaciones***
WSW	***Winter Weather Warning***	***Aviso de Tiempo de Invierno***
BZW	***Blizzard Warning***	***Aviso de Ventisca***
HWW	***High Wind Warning***	***Aviso de Vientos Fuertes***
HUA	***Hurricane, Tropical Storm or Typhoon Watch***	***Vigilancia de Huracán, Tormenta Tropical, o Tifón***
HUW	***Hurricane, Tropical Storm or Typhoon Warning***	***Aviso de Huracán, Tormenta Tropical, o Tifón.***
HLS	***Statement About Hurricane Activity***	***Comunicado Sobre Actividades de Huracán***
TSA	***Tsunami Watch***	***Vigilancia de Tsunami***
TSW	***Tsunami Warning***	***Aviso de Tsunami***
CFA	***Coastal Flood Watch***	***Vigilancia de Inundación Costera***
CFW	***Coastal Flood Warning***	***Aviso de Inundación Costera***
SMW	***Marine Warning***	***Aviso Marina***
MAW	***Marine Warning***	***Aviso Marina***
MWS	***Marine Warning***	***Aviso Marina***
NPW	***Weather Warning***	***Aviso por Mal Tiempo***
AVA	***Avalanche Watch***	***Vigilancia de Avalancha***
AVW	***Avalanche Warning***	***Aviso de Avalancha***

VOA	***Volcano Watch***	***Vigilancia de Eruption Volcánica***
VOW	***Volcano Warning***	***Aviso de Eruption Volcánica***
IEW	***Immediate Evacuation***	***Evacuación Inmediata***
EAN	***Emergency Action Notification***	***Notificatión de Medidas de Emergencia***
EAT	***Emergency Action Termination Notice***	***Aviso de Final de las Medidas de Emergencia***
NPT	***National Periodic Test of the Emergency Alert System***	***Prueba Periódical Nacional del Sisterma de Vigilancia de Emergencia***
EVI	***Immediate Evacuation***	***Evacuación Inmediata***
CEM	***Civil Emergency***	***Emergencia Civil***
CDA	***Civil Danger Watch***	***Vigilancia de Peligro Civil***
CDW	***Civil Danger Warning***	***Aviso de Peligro Civil***
LAE	***Local Area Emergency***	***Emergencia Local***
RHA	***Radiological Hazard Watch***	***Vigilancia de Peligro Radiológico***
RHW	***Radiological Hazard Warning***	***Aviso de Peligro Radiológico***
HMA	***Hazardous Materials Watch***	***Vigilancia por Materiales Peligrosos***
HMW	***Hazardous Materials Warning***	***Aviso por Materiales Peligrosos***
LEW	***Law Enforcement Warning***	***Alarma de las Autoridades de la Ley***
FRW	***Fire Warning***	***Aviso de Incendios***
NMN	***Network Message Notification***	***Aviso de la Red de Mensajes***
RWT	***Weekly Test of the Public Warning System***	***Prueba Semanal del Sistema de Alarma Para el Público***
RMT	***Monthly Test of the Public Warning System***	***Prueba Mensual del Sisterma de Alarma Para el Público***

4.1 Spanish Trailer Message Operations

After a site has set up its database to assign STMs in Block 7B to specific Message Types, the STM will play automatically following the broadcast of a Weather Message containing one of those Message Types. The Message Type must be defined in a Broadcast Suite as usual, and the Weather Message is generated as usual with one of the three acceptable methods (manually recorded voice, AFOS/AWIPS text, or diskette text). The STM is always associated with a primary message and will play only if the following three conditions are met:

1) The Primary Associated Message (PAM) is in English. ***Spanish Message Types and Spanish Weather Messages do not need STMs.***

2) The PAM has NWRSAME tones set for broadcast.

3) The PAM is transmitting on a Spanish capable transmitter.

The STM will immediately follow the NWRSAME trailer tones and optionally may be rebroadcast immediately following the PAM for as long as it stays in effect. The STM will consist only of the watch/warning type(see column three of the Abbreviated Spanish Watch/ Warning Category Types Table), the expiration time, and the affected Listening Areas. It also will contain a brief Spanish Call-To-Action statement and an additional Spanish statement instructing listeners to tune to their local Spanish speaking radio or television station for more information. The CRS software has hardcoded the Spanish text in the STM to speak at a rate of 250 words per minute and with the deep male voice (Harry). Other Spanish voices result in an unacceptable reduction in the voice volume.

It is important to remember that the user will not be able to adjust the voice type of the Spanish text in the STM. However, he may choose to modify the rate from the delivered rate of 250 words per minute. He also may change the volume of and/or the actual text in the STM. Please refer to section 5.0 (Editing Spanish Trailer Components) of this document for details about editing the Spanish trailer components.

The STMs contained in Block 7B contain the Spanish text information, including the three variables ***&what*** (watch/warning type), ***&when*** (expiration time), and **&var** (Listening Areas). The ***&what*** and ***&when*** are broadcast in Spanish, and the ***&var*** is broadcast in English. Since the &var is broadcast in English, the voice parameters of the PAM will be used. CRS substitutes the appropriate dynamic text in place of the & variables prior to the broadcast of the trailer.

The STMs are an additional category of Message Components and as such are retrievable and definable from the Weather Components window. They are retrievable by clicking on Trailer under the Type list. Please note that the Language parameter for the Message Component Trailer is always Spanish; the English option is grayed out. By clicking on the Name list button, you will display the list of Trailer Names. Double clicking on the desired Trailer Name will find the requested Trailer record. You may click on Contents to display the contents of the Trailer text; however, as is the case with all Message Components, you will not be able to click on Play for audible review of the message contents.

You may define a new STM by selecting the New Record hotkey and typing in a new name in the Name box and clicking on the Contents button to display the blank text screen. Enter the desired Spanish text and click on OK and then the Save hotkey to save the new STM. Please note that maximum STM size is 3072 characters.

Three new Message Type fields have been defined in support of the STM capability. In the lower lefthand part of the Message Type window you will see from top to bottom the Mode, Name, and, ***&What*** fields. The Name field assigns a particular STM to the Message Type. The Name in the box is the STM Trailer Name. The Mode field is either Once, Always, or Never and represents whether the STM will play once (immediately after the NWRSAME trailer tones only), always (rebroadcast immediately following the PAM for as long as it stays in effect), or not at all. The ***&What*** field is the watch/warning type in Spanish, e.g., Aviso de Tornado. The ***&What*** field has a maximum size of 80 characters. These fields may be created and edited from the Message Type window to assign an STM.

You can not add trailers to Spanish Language Message Types. If Spanish is selected as the Language, the trailer widgets will be inaccessible in the Message Type window (grayed out).

Indication of STM presence in the active broadcast schedule is provided in the Broadcast Cycle screen under a new column heading entitled Trailer. A "1" indicates that the STM plays once and "A" indicates always. The predicted time of broadcast for subsequent messages following the STM in the cycle are suitably offset to accommodate the predicted time necessary to play the STM, although ***&what***, ***&when***, and ***&var*** text substitutions are not taken into account when computing the offset.

4.2 ADD_SPA Utility Operation

Canned STMs for all possible NWRSAME toned messages are being delivered with the Build 6.0 software. A new utility program, ADD_SPA, is being added to the XCRS_SITE window. Build 6.0 installs the canned STMs on the 0MP as /crs/data/SS/SPACOMP.TXT. Each of the 49 entries in SPACOMP.TXT also contains the 3-character Trailer Name and the Spanish ***&what*** in addition to the STM. As soon as sites install Build 6.0, they are instructed to immediately run the ADD_SPA utility to add the new abbreviated Spanish watch/warning information to the ASCII database file.

It is extremely important that the selected ASCII database file is the most up-to-date file available and contains all the changes to the database that have been made via the CRS Control Interface windows. Since the database will be reloaded via the ASCII database file, it also is extremely important to backup the Word Pronunciation Dictionary files prior to reloading.

ADD_SPA performs the following functions:

1) It reads in the Trailer Name, Spanish ***&what***, and STM for each entry in

SPACOMP.TXT. It writes the Trailer Name and associated STM to a new message component Block 7B in the ASCII database file. It also assigns a Language parameter of 1 (1 = Spanish) to each Trailer Name. The Trailer Name and associated ***&what*** are placed in a temporary file for later use.

2) It will ask users which transmitter channels they wish to configure for Spanish DECtalk. This information will be used to update Block 5 (Transmitter Configuration) of the ASCII database file. If one or more transmitter channels are to be Spanish capable, ADD_SPA also will make the playback channel(s) Spanish capable as well. ***ADD_SPA will not permit the selection of Spanish Language Message Types because they will be ignored for Spanish Weather Messages.***

3) It will ask users to select Message Types that are to be assigned STMs. The middle three characters of the Message Type must match a Trailer Name from the temporary file.

4) For each Message Type selected, it will write the matching Trailer Name and associated ***&what*** to the new optional Trailer Indicator line in Block 10 (Message Type) of the ASCII database file.

5) It will ask users to select a Trailer Mode for the selected Message Type. The Trailer Mode is 1 (STM plays only once) or 2 (STM plays until PAM expires). The Trailer Mode is also written to the Trailer Indicator line.

6) When users have completed assigning STMs, ADD_SPA writes the updated ASCII database file back to disk using the original filename and saves the original file to disk using the original filename with the .ORG extension in place of .ASC. The name of the updated ASCII file will contain the .ASC extension.

Upon successful completion of ADD_SPA, users must reload the database from the ASCII database (.ASC) file via the XCRS_SITE window in order to have the ADD_SPA generated changes effected. Remember to restore the Word Pronunciation Dictionary files prior to restarting the CRS application.

ADD_SPA may be used again following the installation of Build 6.0 if a site desires to update the ASCII database file to assign STMs to additional Message Types or select additional Spanish capable transmitters.

4.3 ASCII Database File Additions

The additional abbreviated Spanish watch/warning capability provided in Build 6.0 required an update of the existing ASCII database file design to accommodate the new information. The STM is designed as an additional Message Component and is handled similarly to the other Component types (CTAs, Lead-Ins, etc.). A new Block 7B has been defined to contain the STM and must be added immediately after the existing Call-To-Action Component block (Block 7).

The following is an example:

....

....

BLOCK 7B:

#Name	**Language**	**Text**
TOR	**1**	**"Esta mensaje es en espanol. Muchas gracias."**
SVR	**1**	**"Esta mensaje es en espanol. Adios amigos."**

....

....

....

The Name is the Trailer Name. The Language is 1 for Spanish. The Text refers to the actual STM.

Please note that you should not attempt to edit the existing text for the STM. Many of these messages (unlike the examples here) contain special characters to achieve the special Spanish pronunciation. Editing these words may inadvertently change the pronunciation.

The other change involves adding a new optional Message Type Trailer indicator line that contains the Trailer Mode, Trailer Name, and ***&What***. Valid Trailer Mode values are 0-Never, 1-Once, and 2-Always. The Trailer Mode determines how many times the STM will broadcast. Valid Trailer Names must be existing Trailer Components specified in new Block 7B. The ***&What*** field contains the Spanish watch/warning type. If there is no &What text to voice in the STM, this field must be set to NULL.

Do not add trailers to Spanish Language Message Types because they will be ignored for Spanish Weather Messages.

The following is an example:

....

....

Block 10:

#MessageTypeBlock

....

....

LAXTORGEN “Tornado Warning” 0 4 2 1

....

....

....

#indicator TrailerMode Trailer Name &What

trailer 1 TOR “Aviso de Tornado”

....

....

....

LAXSVRGEN “Severe Thunderstorm Warning” 0 4 2 1

....

....

....

#indicator TrailerMode Trailer Name &What

trailer 2 SVR “Aviso de Tormenta Severa”

5.0 Editing Spanish Trailer Components

While the STM volume and rate settings delivered in Build 6.0 were optimized for maximum clarity, individual sites still may find it necessary to modify them. Because for a given voice type, the volume of the Spanish text was much reduced when compared to the English text, we have compensated for the reduction by increasing the volume of the STMs to the maximum level permitted by DECtalk, which is 99. Therefore, you will notice that Block 7B has the following commands imbedded in the text at the beginning and the end of the STMs respectively:

[:volume up 74]

[:volume down 74]

These commands will increase/decrease the volume by 74 relative to the volume of the given message. 74 was chosen based on the assumption that the original message had a volume of 25, thereby increasing it to the maximum volume of 99. Obviously, not all sites will have their message types for which STMs are assigned set to a volume of 25. Therefore, it may be necessary to adjust the **:volume up** and **:volume down** commands to compensate accordingly. For instance, if the volume setting for a STM message type is 50, you would change 74 to 49.

The OT&E consensus for the optimum STM speech rate was 250 words per minute. However, we recognize that individual sites may want adjust the rate to account for individual preferences. The rate is set internally in the software, but may be overwritten by imbedding the following DECtalk command at the start of the STM:

[:rate xxx]

where xxx represents the rate in words per minute. For example, to change the rate to 200 words per minute, you would insert the following at the beginning of the STM:

[:rate 200]

The new rate will only affect the Spanish text in the specific STM to which it is added.

Sites may also modify the actual Spanish text in the STM, though great care must be exercised because of the special Spanish characters.

Sites may modify the STM through the GUI by accessing the **Message Components** window, selecting **Trailer**, and accessing the specific component to change. Click on **Contents** and the STM will be displayed for editing. Clicking on the **Save** hot key will save the modified STM into the database. As with all CRS database changes made via the GUI, they also should be made to the ASCII database file. Therefore, Block 7B must be edited to ensure proper database backup insurance.